

CHAPTER 4. OTHER INSTRUMENT PROCEDURE TASKS	2
SECTION 1. GENERAL	2
400. PURPOSE	2
401. ENROUTE	2
a. REGULATORY BASIS FOR ENROUTE TYPES OF AIRSPACE	2
1. § 71.33 Class A airspace areas	3
2. § 71.71 Class E airspace	3
b. REGULATION REFERENCES FOR ENROUTE PROCEDURES	4
1. AIM – Types of Airspace	4
2. 14 CFARs PART 71/95	4
3. 8260.3 United States Standard for Terminal Instrument Procedures (TERPS)	4
4. 8260.19 Flight Procedures and Airspace	4
5. 8400.10 – AIR TRANSPORTATION OPERATIONS INSPECTOR'S HANDBOOK	4
6. AC 61-27 - XII. ATC OPERATIONS AND PROCEDURES - Enroute Procedures	5
402. DEPARTURE PROCEDURES (DP's)	5
403. STANDARD TERMINAL ARRIVAL ROUTE (STAR)	5
a. Flight Procedures and Airspace, Handbook 8260.19	6
b. Terminal Instrument Procedures, Handbook 8260.3	6
c. Airman's Information Manual (AIM) 5-4-1	6
404. SPECIAL INSTRUMENT PROCEDURES	6
a. Technical Programs Division (AFS-400)	6
b. National Flight Procedures Office (NFPO) (AVN-100)	6
c. Regional Flight Procedures Office	7
405. AGREEMENTS	7
a. Interagency Agreement	8
b. Interagency Contract	8
c. Intra-agency Agreement	8
d. Memorandum of Agreement (MOA)	8
e. Memorandum of Understanding (MOU)	8
f. Reimbursable Agreement	8
406. AVN-100 AGREEMENT PROCESS	8
PRE-AGREEMENT PRIVATE AIRPORTS/HELIPORTS FORM	9
407. CHARTED VISUAL FLIGHT PROCEDURE (CVFP) PROCESSING	11
408. FLIGHT MANAGEMENT SYSTEM (FMS)	11
409. EXPANDED SERVICE VOLUME (ESV)	11
410. MINIMUM VECTORING ALTITUDE CHART (MVAC)	12
a. VECTORING ALTITUDE CHARTS FOR TERMINAL/EARTS FACILITIES	13
b. MVA CHART PREPARATION (TERMINAL/EARTS)	13
411. MINIMUM IFR ALTITUDE CHART (MIA)	17
412. EMERGENCY OBSTRUCTION VECTORING MINIMUMS (EOVM)	17
413. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM)	17
a. EOVM Use	17
b. EOVM Design	17
c. EOVM Production	18
d. EOVM Verification	18
414. NOTAMS	18
a. T NOTAMS	18
b. P NOTAMS	19
c. USD NOTAMS	19
d. NOTAM CANCELLATIONS	19

Chapter 4. OTHER INSTRUMENT PROCEDURE TASKS

Section 1. GENERAL

400. PURPOSE

This chapter provides the Flight Procedures Office (FPO) with a detailed explanation of the policies, processes, and procedures for processing:

- (1) Enroute Procedures
- (2) Departure Procedures (DP),
- (3) Standard Terminal Arrival Routes (STARS)
- (4) Special Instrument Approach Procedures
- (5) Reimbursable Activities
- (6) Charted Visual Flight Procedures (CVFP)
- (7) Flight Management Procedures (FMS)
- (8) Expanded Service Volume (ESV)
- (9) Minimum Vectoring Altitude Charts (MVAC)
- (10) Minimum IFR Altitude Charts (MIA)
- (11) Emergency Obstruction Video Maps (EOVM) and
- (12) Notices to Airman (NOTAMS).

401. ENROUTE

The Federal Aviation Act of 1958 (FA Act), and subsequent amendments, legislates the FAA's responsibility for maintaining a safe National Airspace System (NAS). The development of Enroute Procedures represents a major undertaking in meeting this requirement of the FA Act. Enroute operations whether level flight or transition into and out of terminals facilitate an important role in the safety of the NAS.

a. REGULATORY BASIS FOR ENROUTE TYPES OF AIRSPACE

Establishing most enroute airspace is associated with rule making actions involving airspace Class A or E. Amendments to the listings of Class A, Class B, Class C, Class D, and Class E airspace areas and to reporting points will be published in full text as final rules in the Federal Register. Periodically, the final rule amendments will be integrated into a revised edition of the Order and submitted to the Director of the Federal Register for approval for incorporation by reference in this section. Copies of FAA Order 7400.9, as amended, may be obtained from the Airspace and Rules Division, ATA-400, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, (202) 267-8783. Copies of FAA Order 7400.9 may be inspected in Docket Numbers at the Federal Aviation Administration, Office of the Chief Counsel, AGC-200, Room 915G, 800 Independence Avenue, SW., Washington, D.C., weekdays between 8:30 a.m. and 5:00 p.m., or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. Establishing initial airspace actions on rule making activities requires different time constraints than normal procedures. ATA-400 has a separate time schedule for rule making processing.

1. § 71.33 Class A airspace areas.

(1) That airspace of the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States, from 18,000 feet MSL to and including FL 600 excluding the states of Alaska and Hawaii, Santa Barbara Island, Farallon Island, and the airspace south of latitude 25°04'00" North.

(2) That airspace of the State of Alaska, including that airspace overlying the waters within 12 nautical miles of the coast, from 18,000 feet MSL to and including FL 600 but not including the airspace less than 1,500 feet above the surface of the earth and the Alaska Peninsula west of longitude 160°00'00" West.

(3) The airspace areas listed as offshore airspace areas in subpart A of FAA Order 7400.9 (incorporated by reference, see § 71.1) that are designated in international airspace within areas of domestic radio navigational signal or ATC radar coverage, and within which domestic ATC procedures are applied.

2. § 71.71 Class E airspace.

Consists of:

(1) The airspace of the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous states and Alaska, extending upward from 14,500 feet MSL up to, but not including 18,000 feet MSL, and the airspace above FL 600, excluding -

(1) The Alaska peninsula west of longitude 160°00'00" W.; and

(2) The airspace below 1,500 feet above the surface of the earth

(2) The airspace areas designated for an airport in subpart E of FAA Order 7400.9 (incorporated by reference, see § 71.1) within which all aircraft operators are subject to the operating rules specified in part 91 of this chapter.

(3) The airspace areas listed as domestic airspace areas in subpart E of FAA Order 7400.9 (incorporated by reference, see § 71.1) which extend upward from 700 feet or more above the surface of the earth when designated in conjunction with an airport for which an approved instrument approach procedure has been prescribed, or from 1,200 feet or more above the surface of the earth for the purpose of transitioning to or from the terminal or enroute environment. When such areas are designated in conjunction with airways

or routes, the extent of such designation has the lateral extent identical to that of a Federal airway and extends upward from 1,200 feet or higher. Unless otherwise specified, the airspace areas in the paragraph extend upward from 1,200 feet or higher above the surface to, but not including, 14,500 feet MSL.

b. REGULATION REFERENCES FOR ENROUTE PROCEDURES

The following reference provide guidance of utilizing and developing enroute procedures:

1. AIM - Types of Airspace

Provides definition and operating instruction of various types of airspace (Chapter 3. Chapter 5 contains most of the guidance on enroute operations.

2. 14 CFARS PART 71/95

Designation of Class A, Class B, Class C, Class D, and Class E Airspace Areas; Airways; Routes; and Reporting Points. Part 95. IFR Altitudes.

3. 8260.3 United States Standard for Terminal Instrument Procedures (TERPS)

United States Standard for Terminal Instrument Procedures (TERPS) - Prescribes procedure for designing Federal Airways, jet routes, area navigation, or other direct routes. Establishing protected area (length and width) and altitude are covered in Chapter 17.

4. 8260.19 Flight Procedures and Airspace

Provides responsibilities, criteria, and policy standards for procedure personnel to carry out their duties. Chapter 3 cover various aspects related to enroute operations.

5. 8400.10 - AIR TRANSPORTATION OPERATIONS INSPECTOR'S HANDBOOK

This order is referred to as a handbook and directs the activities of operations aviation safety inspectors (ASIs) who are responsible for the certification, technical administration, and surveillance of air carriers and certain other air operators who conduct their operations in accordance with Parts 121 and 135 of the Federal Aviation Regulations (FARs). It also contains regional and district office requirements for the support of ASIs responsible for those activities. SECTION 4. PART B - ENROUTE AUTHORIZATIONS AND LIMITATIONS covers various aspects of enroute operations.

6. AC 61-27 - XII. ATC OPERATIONS AND PROCEDURES - Enroute Procedures

This AC explains pilot procedures while operating in an enroute environment.

402. DEPARTURE PROCEDURES (DP's)

The guidance for accomplishing the Instrument departure procedures program is incorporated in FAA Order 8260.46. This order contains criteria used to formulate, review, approve, and publish procedures for instrument departure of aircraft from civil and military airports. This order covers PILOT-NAV and VECTOR departures. Close coordination is required with Air Traffic for selected routing. This order also covers the development of Takeoff Minimums. Takeoff Minimums do not apply to all users, see CFR FAR PART 91.175 (f) Civil airport takeoff minimums. Unless otherwise authorized by the Administrator, no pilot operating an aircraft under parts 121, 125, 127 {Part 127 was removed at Amdt. 127-45, 60 FR 65832, Dec. 20, 1995 - Ed.}, 129, or 135 of this chapter may takeoff from a civil airport under IFR unless weather conditions are at or above the weather minimum for IFR takeoff prescribed for that airport under part 97 of this chapter. If takeoff minimums are not prescribed under part 97 of this chapter for a particular airport, the following minimums apply to takeoffs under IFR for aircraft operating under those parts:

- (1) For aircraft, other than helicopters, having two engines or less - 1 statute mile visibility.
 - (2) For aircraft having more than two engines - 1/2 statute mile visibility.
 - (3) For helicopters - 1/2 statute mile visibility.
- If the takeoff minimums at an airport must apply to all aircraft then they must be stated in a clearance such as a departure procedure, just placing the "T" symbol on a departure does not mean compliance. Other references:

14 CFR FAR's PART 91/121 & 135. These federal regulations cover mandatory compliance for general aviation, air transport and air carrier operations.

Terminal Instrument Procedures, Handbook 8260.3. Chapter 12 provides the criteria for evaluating the surfaces and routes applicable to departure procedures.

Flight Procedures and Airspace, Handbook 8260.19. This handbook provides guidance for AVN personnel for the administration and accomplishment of the departure criteria.

Order 8200.1, United States Standard Flight Inspection Manual. This order contains policy, criteria and procedures for the flight inspection of navigational aids and instrument flight procedures.

AC 61-27 - XII. ATC OPERATIONS AND PROCEDURES - Departure Procedures - explains pilot procedure while operating in the departure environment.

403. STANDARD TERMINAL ARRIVAL ROUTE (STAR)

STARs have been established and published as an air traffic control aid in certain complex terminal areas. They help reduce verbiage on clearance delivery and control frequencies and provide the pilot with a description of terminal routing. STARs are currently published in

National Ocean Survey booklets. Instructions for pilot use of these coded routes are contained in the Airman's Information Manual. Certain complex terminal areas are covered by Area The procedures for accomplishing the Instrument departure procedures program is incorporated in FAA Order 7100.9. This order contains criteria used to formulate, review, approve, and publish procedures for instrument arrival of aircraft to civil and military airports. Other references:

a. Flight Procedures and Airspace, Handbook 8260.19

This handbook provides guidance for AVN personnel for the administration and accomplishment of the STAR criteria.

b. Terminal Instrument Procedures, Handbook 8260.3

Chapter 17 provides the criteria for evaluating the transition routes applicable to STAR procedures. All routes and fixes utilized on STAR routes must meet enroute criteria IAW TERPS.

c. Airman's Information Manual (AIM) 5-4-1

STANDARD TERMINAL ARRIVAL (STAR), FLIGHT MANAGEMENT SYSTEM PROCEDURES (FMSP) FOR ARRIVALS provides guidance for piloting while assigned and on STAR routes.

404. SPECIAL INSTRUMENT PROCEDURES

The Flight Standards Service (AFS) is responsible for the establishment and maintenance of special flight procedures. The director has final authority to issue, amend, and terminate rules and regulations relating to special terminal instrument procedures and minimum equipment requirements. AVN provides criteria/standards development, procedures development, and procedures flight inspection support services as required by the Flight Standards Service.

a. Technical Programs Division (AFS-400)

This division is the principal element of the Flight Standards Service governing policies for establishing and maintaining special flight procedures, and, for using air navigation facilities, appliances, and systems. The division is responsible for approval/disapproval of special instrument procedures.

b. National Flight Procedures Office (NFPO) (AVN-100)

This office is the principal element with respect to the development of special procedures concerning application of standards and criteria for overall accomplishment of the Flight Procedures Program and serves as the focal point to the Flight Standards Service for all matters relating to airspace and cartographic programs. This office is the focal point for approach aids, obstruction criteria, and approach procedures and is responsible for the development, evaluation, and review of waiver requests and the development of recommendations for submission to the Flight Standards Service to support a special procedure. The NFPO consists of five Flight Procedures Development Branches, which are geographically separated, and a Technical Support Branch.

c. Regional Flight Procedures Office

Each Flight Procedures Development Branch contains a Flight Procedures Office (FPO) within each region. The FPO is responsible for coordinating all special instrument procedures within the region's geographic area with the Flight Standards All-Weather Office. The FPO is the focal point for establishing and maintaining Special Instrument Approach Procedures to ensure that aircraft operations can be conducted safely and in accordance with applicable criteria and standards. Optimizing the distribution and utility of these valuable resources requires careful evaluation of SIAP needs, benefits to the sponsor of a special procedure. Specific major responsibilities are:

- (1) Plans and coordinates the regions requirements for special instrument flight services.
- (2) Conducts and coordinates instrument procedure feasibility studies.
- (3) Determines requirements for waivers of criteria to resolve special or unique operational problems. Submits justifications and recommends options for meeting the equivalent level of safety provided by standard application of all required criteria.
- (4) Evaluates and processes industry comments on instrument procedures.
- (5) Coordinates with regional divisions and the appropriate AVN organization to specify a charting date consistent with priorities and workload, when a special instrument procedure is requested.
- (6) Ensure sponsor of a special instrument procedure submit necessary information for AVN-100 personnel to design the procedures utilizing TERPS criteria and evaluate necessary environmental constraints.

405. AGREEMENTS

This section contains the policy, procedures and processes for requesting and obtaining approvals of agreements between the sponsor and the FAA prior to developing a special instrument procedure.

Reference: FAAM FB 93-05 Federal Aviation Acquisition Manual

FAAM FB 95-08 Unauthorized Commitments

FAAM FB 95-09 Interagency Acquisitions/Agreements

FAA Directive 2500.5D Budget and Accounting

FAA Directive 2500.35C Reimbursable Agreements

FAA Directive 2500.36N Flight Hour Rate Table

FAA Acquisition Management System Chapter 3

Title 31, U.S. Code 1535

Title 49, U.S. Code 322

Federal Aviation Reauthorization Act of 1996-Public Law 104-264

Definitions and Terms:

a. Interagency Agreement

A written agreement between another agency and FAA, where the other agency agrees to perform work for the FAA, and the FAA agrees to reimburse the other agency for the activity. (FAA funds are obligated).

b. Interagency Contract

A written contract between the FAA and the SBA under which a section 8(a) minority business subcontractor agrees to perform work for the FAA, and the FAA agrees to reimburse the SBA business for the activity. (FAA funds are obligated).

c. Intra-agency Agreement

A written agreement between the FAA and OST or another OST operating administration where the requesting organization agrees to provide or exchange supplies or services with the FAA and FAA funds are obligated.

d. Memorandum of Agreement (MOA)

A binding written document between two agencies for exchange of services or goods which does not result in FAA funds being obligated.

e. Memorandum of Understanding (MOU)

A non-binding written document between two agencies for exchange of services or goods which does not result in FAA funds being obligated.

f. Reimbursable Agreement

A written agreement where the FAA provides materials or services to a requesting agency or organization and they agree to reimburse the FAA for such material or services. (FAA funds are not obligated).

406. AVN-100 AGREEMENT PROCESS

- (1) Request for instrument procedure - usually through FPO or Flight Standards All-Weather Operation Person (AWOP)
- (2) FPO starts data collection & coordination w/AFS/AWOP & proponent.
- (3) FPO contacts agreement office.
- (4) Agreement Office: Provides production team member to help develop agreements.
- (5) FPO - receives agreement number
- (6) FPO - begins processing & logging time on project
- (7) FPO - forwards project request, data, time-log to AVN-100 branch office.

- (8) Branch office - develops procedure & logs time on project.
- (9) Branch office - forwards project to quality assurance.
- (10) Flight Inspection (FI)- action & cost accounting.
- (11) Branch office - final processing completed, time log sent to account.
- (12) AVN-100 submits a quarterly roll up of man hours to AVN-20.
- (13) The following worksheet, available in WORD document format, must be completed, by the sponsor, prior to beginning any, procedure or flight inspection, work.

PRE-AGREEMENT PRIVATE AIRPORTS/HELIPORTS FORM

A signed reimbursable agreement between the Department of Transportation/Federal Aviation Administration, and your organization must be on file in our office prior to starting any procedure development. Obtain the reimbursable agreement by completing the following form:

Name of airport/heliport as indicated on 5010:

Airport/heliport manager or person responsible for operations at the landing/departure site: _____

Legal address of the airport/heliport as indicated on 5010:

Telephone number at airport/heliport:_____

Person to which FAA will render bills for the project costs incurred:

NAME: _____

Address:_____

Telephone number/s:_____

Company, corporation, etc., if applicable, who will hold this agreement for an airport/heliport/helipad:_____

Name: _____

Address:_____

Telephone number/s: _____

Mail the above information to the following:_____

FAA/

Attn: _____

Address: _____

Telephone number/s: _____

Technical Representative: _____

407. CHARTED VISUAL FLIGHT PROCEDURE (CVFP) PROCESSING

This section contains the policy, procedures and processes for requesting and obtaining approvals of a Charted Visual Procedures to support Air Traffic Services operations. The procedures for accomplishing Charted Visual Flight Procedures is incorporated in FAA Order 7110.79. This order contains criteria used to formulate, review, approve, and publish procedures for instrument arrival of aircraft to civil and military airports. CVFP are developed to aid air traffic operationally utilizing visual references in a terminal to expedite arriving traffic and specify routes to enhance noise abatement. Flight inspection is required to ensure visual cues are clearly identifiable during the arrival phase into the terminal areas utilizing suggested visual references.

408. FLIGHT MANAGEMENT SYSTEM (FMS)

This section contains the policy, procedures and processes for requesting and obtaining approval of FMS systems for instrument arrival and departure procedures. The procedures for accomplishing FMS Procedures is incorporated in FAA Order 7110.40.

409. EXPANDED SERVICE VOLUME (ESV)

8260-19 Chapter 9 Section 2 contains criteria on developing and processing ESV's. The following are procedures to acquire an ESV.

a. When developing new or revised procedures of any type, every effort should be made to develop them within the limits of the standard service volume (SSV) of airspace associated with the facility class. This airspace is a cylindrical volume for NDB, VOR, DME, VORTAC, and TACAN, and a trapezoidal volume for ILS. The dimensions of the various service volumes can be found in Order 8260.19, chapter 2, section 4.

b. NAVAID's shall not be certified for use beyond the normal service volume unless the following criteria are satisfied:

- (1) The Frequency Management Office (FMO) determines that the desired ESV (course, altitude, and distance) is theoretically frequency-protected in accordance with criteria in FAA Order 6050.32.
- (2) The FMO determines that the required power availability at the extremity of the ESV can be obtained.
- (3) A confirming flight check is accomplished.
- (4) Co-channel and adjacent channel facilities which may cause interference with operations
- (5) A check is made with the power output of the facility being reduced to the monitor alarm limit (ILS LOC only).
- (6) The ESV is flight checked on the even years (ILS LOC only).

- (7) The final certification (course, altitude, and distance) is filed with the FMO and the FMO is informed of subsequent changes.

c. Requests for establishment of flight procedures or general operational use of a NAVAID beyond the standard service volume, an ESV, shall be submitted to the FMO on FAA Form 6050-4, Expanded Service Volume Request.

- (1) The originator of the flight procedure or operational requirement shall forward all requests for an ESV on FAA Form 6050-4, Part I, to the FMO.
- (2) The form will then be processed according to Order 8260.19, chapter 2, section 4.
- (3) The FMO will determine whether or not the desired theoretical frequency protection and signal strength can be provided and complete Part II of FAA Form 6050-4. The ESV will then be considered pending until the final action by the Flight Inspection Area Office (FIO).
- (4) FIO will complete Part III of FAA Form 6050-4 to AVN-100 which will make distribution of the copies as indicated. Upon receipt of final action, the FMO will consider the ESV complete. These same following steps will apply to an ESV modification or cancellation.
 - (a) The originating offices, upon receipt of this order, will review Appendix 11 to ensure that all ESV requirements are recorded and are still valid. This tabulation does not include SW Region's requirements on other region facilities.
 - (b) The FMO will inform the originating office of any changes in the theoretical frequency protection or areas of possible interference resulting from frequency changes, reclassification, new assignments, etc.
 - (c) The originating office, upon receipt of any changes in the theoretical frequency protection or areas of possible interference resulting from frequency changes, reclassification, new assignments, etc., will take immediate action to limit use of the facility as necessary to assure interference free operation.
 - (d) The FMO shall be responsible for interregional coordination, through channels, of matters concerning frequency interference and service volumes traversing regional boundaries.

410. MINIMUM VECTORING ALTITUDE CHART (MVAC)

This section contains the policy, procedures and processes for requesting and obtaining approvals of a MVAC. 8260-19 Chapter 3

Section 7 contains criteria on developing and processing MVAC's. Guidance in FAA Order 7210.3 Chapter 3 defines for air traffic the procedure for developing and processing MVAC.

a. VECTORING ALTITUDE CHARTS FOR TERMINAL/EARTS FACILITIES

AT managers shall determine the location and the method for the display of vectoring altitude charts to provide controllers with the minimum vectoring altitudes as follows:

- (1) Minimum vectoring altitude (MVA) charts shall be out to the maximum ASR radar range when prepared for ASR terminal systems and for EARTS facilities that utilize single site adapted ASR radar.
- (2) When ARSR's are used by EARTS facilities for terminal and/or approach control services, EARTS shall provide one of the following:
 - (a) An MVA chart for the facility single-site adapted terminal area, not to exceed 40 NM from the antenna, and a minimum IFR altitude (MIA) chart beyond 40 NM from the antenna to the maximum ARSR radar range; or;
 - (b) An MVA chart out to the maximum ASR radar range; or
 - (c) An MIA chart out to the maximum ARSR radar range.

b. MVA CHART PREPARATION (TERMINAL/EARTS)

Air Traffic will prepare a vectoring chart as follows:

- (1) Draw the MVA chart on two current sectional aeronautical charts.

NOTE -Original-quality color copies of MVA charts or computer generated original-quality color MVA charts may be substituted for this requirement with AVN approval. The accuracy and scale of the original MVA chart shall be maintained when submitting reproductions of the original chart.
- (2) Center the chart on the location of the radar antenna site.
- (3) Segment the chart into areas as required by the different minimum vectoring altitudes. Configuration of the areas and the features to be depicted will vary with local terrain and operational considerations. Use the following methods as applicable:
 - (a) Depict the areas in relationship to the magnetic bearings from the antenna site, radials from VOR/ VORTAC/TACANs, or radar display range marks.
 - (b) To facilitate correlation between vectoring charts and radar displays, make area boundaries coincident or compatible with map overlay or video map data.

- (c) Make each large enough to accommodate vectoring of aircraft. In some cases it may be desirable to combine adjoining smaller areas having different altitudes into a single large area with one altitude.
 - (d) Establish area boundaries at least 3 miles (5 miles if 40 miles or more from the antenna site) from the obstruction determining the MVA.
 - (e) To avoid a large area with an excessively high MVA due to an isolated prominent obstruction, enclose the obstruction with a buffer of at least 3 miles (5 miles if 40 miles or more from the antenna site) from the obstruction. Do this to facilitate vectoring around the obstruction.
- (4) Determine the minimum IFR vectoring altitude in each area by applying FAAO 8260.19, Flight Procedures and Airspace Obstacle Clearance/Reductions.

NOTE -MVA's are established irrespective of the flight-checked radar coverage in the sector concerned. They are based on obstruction clearance criteria only. It is the responsibility of the controller to determine that a target return is adequate for radar control purposes.

- (5) An MVA may be established within Class G airspace. When this is done, note it on the chart.

NOTE - In this case, consider obstruction clearance only.

- (6) Ensure that MVAs on charts are compatible with vectoring altitudes established for associated radar instrument approach procedures.
- (7) Depict the MVA in each area.
- (8) Document the controlling obstructions on FAA Form 7210-9.
- (9) Affix the facility name on both MVA charts and include the edition and date of the sectional chart used to prepare the MVA chart. Forward both MVA charts and two copies of FAA Form 7210-9, Minimum IFR Altitude/Minimum Vectoring Altitude Obstruction Documentation, to the appropriate FPO through the Regional Air Traffic 530 Branch. The FPO will review the MVA charts and indicate approval by signing and dating the charts and FAA Form 7210-9. FPO review is limited to certifying that altitude selections within each MVA boundary are adequate according to the criteria. A copy of the approved MVA chart and FAA Form 7210-9 will be retained in the FPO, and the other returned to Air Traffic.

- (10) AT managers shall assure that MVA charts are reviewed at least annually to ensure chart currency and simplicity. Charts shall be revised immediately when changes affecting minimum vectoring altitudes occur. For annual review or necessary changes, charts shall be prepared as prescribed in subparagraphs (1) through (9). AT managers shall obtain FPO certification for both annual reviews and revisions.
- (11) FAA Form 7210-9, MIA/Minimum Vectoring Altitude Obstruction Documentation, will be stocked at the depot and additional copies may be ordered through normal supply channels (NSN: 0052-00-911-3000 U/I:SH). The following calculations (available in Excel format, from AVN-160).

MINIMUM VECTORING ALTITUDE COMPUTATIONS		
1. SECTOR (ENTER DESCRIPTION)		
A. MVA REQUIRED FOR TERRAIN/OBSTACLE CLEARANCE		SECTOR
(1). CONTROLLING OBSTACLE (ENTER DESCRIPTION)		
(2). CONTROLLING OBSTACLE HEIGHT (MSL)	1000	2500
(3). REQUIRED OBSTACLE CLEARANCE (Normally 1000' / 2000' Mountainous Area)		1000
(4). REQUIRED ALTITUDE BASED ON OBSTACLE CLEARANCE	2000	3500
B. MVA REQUIRED FOR AIRSPACE		
(1). FLOOR OF CONTROLLED AIRSPACE (AGL, if MSL Skip items 1 & 2) Normally 0, 700 or 1200 FT		1200
(2). HIGHEST TERRAIN WITH THE SECTOR		800
(3). FLOOR OF CONTROLLED AIRSPACE (MSL)		2000
(4). ADD 300 FEET		300
(5). REQUIRED ALTITUDE BASED ON AIRSPACE FLOOR		2300
C. SELECTED SECTOR ALTITUDE (Note: Highest of above calculations)		3500

411. MINIMUM IFR ALTITUDE CHART (MIA)

Follows the same procedures as defined for MVA process except as provide in FAA Order 7210.37. 8260-19 Chapter 3 Section 7 contains criteria on developing and processing MIAs.

412. EMERGENCY OBSTRUCTION VECTORING MINIMUMS (EOVM)

This section contains the policy, procedures and processes for requesting and obtaining approvals of a EOVM. 8260-19 Chapter 3 Section 7 contains criteria on developing and processing EOVMs. Guidance in FAA Order 7210.3 Chapter 3 defines for air traffic the procedure for developing and processing EOVM.

413. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM)

An EOVM shall be established at all terminal radar facilities that have radar coverage in designated mountainous areas and an available channel in their video mappers. This map is intended to facilitate advisory service to an aircraft in an emergency situation wherein an appropriate terrain/obstacle clearance minimum altitude cannot be maintained.

NOTE 1- Designated mountainous areas are identified in FAR Part 95, Subpart B.

NOTE 2- Appropriate terrain/obstacle clearance minimum altitudes may be defined as MIA, MEA, Minimum Obstruction Clearance Altitude (MOCA), or Minimum Vectoring Altitude (MVA).

Alternatives, such as combining existing maps, eliminating a lower priority map or, as a least desirable alternative, merging the EOVM with the MVA map, shall be considered when necessary to accommodate the EOVM.

a. EOVM Use

The EOVM shall be used and the advisory service provided only when a pilot has declared an emergency or a controller determines that an emergency condition exists or is imminent because of the inability of an aircraft to maintain the appropriate terrain/obstacle clearance minimum altitude/s.

b. EOVM Design

- (1) The basic design of the EOVM shall incorporate the following minimum features:
 - (a) Base contour lines of the mountains with the highest peak elevation of each depicted mountain plus 200 feet for natural low obstacle growth.
 - (b) Highest elevations of adjacent topography; e.g., valleys, canyons, plateaus, flatland, etc., plus 200 feet, or water.

- (c) Prominent manmade obstacles; e.g., antennas, powerplant chimneys, tall towers, etc., and their elevations.
- (d) Satellite airports and other airports which could serve in an emergency.
- (e) MVA if the EOVM must be merged with the MVA map for the former to be accommodated.
- (f) Other information deemed essential by the facility.

NOTE -To avoid clutter and facilitate maintenance, information depicted on the EOVM should be restricted to only that which is absolutely essential.

- (2) All elevations identified on the EOVM shall be rounded up to the next 100-foot increment and expressed as MSL altitudes.

NOTE -To avoid unnecessary map clutter, the last two digits are not required

EXAMPLE - 2 = 200, 57 = 5700, 90 = 9000, 132 = 13200

c. EOVM Production

The preparation and procurement of the EOVM shall be accomplished in accordance with FAAO 7910.1, Aeronautical Video Map Program.

d. EOVM Verification

The original EOVM procurement package and any subsequent changes shall be checked for adequacy and then coordinated with the appropriate FIO to verify the accuracy of its information. Annually, the EOVM shall be reviewed for adequacy and re-coordinated with the FIO for accuracy.

414. NOTAMS

FAA Order 7930.2 cover issuing and dissemination of NOTAMS. Chapter 1 Section 3 defines AVN's responsibility for issuance of FDC NOTAMS. AVN guidance for NOTAMS can be found in Order 8260.19, chapter 2, section 6. FDC NOTAM Procedures covers NOTAM material normally issued by AVN-100 personnel. Other NOTAMS normally issued by AVN are departure procedure NOTAMS (USD). There are essentially two types of FDC NOTAMS: Temporary "T", and Permanent "P".

a. T NOTAMS

T NOTAMS are generally issued for temporary situations such as cranes, oil derricks, minimum adjustments, etc., not exceeding 120 days. However, often procedure specialist make temporary adjustments to instrument procedures pending an amendment, when a P is not appropriate. In this case it is recommended you place such a statement in the REASONS section of the NOTAM. It is not unusual that the actual amendment may refine data included in the NOTAM but great care should be taken to ensure the NOTAM reflects the maximum level of safety. When a T NOTAM is issued, all that happens is it is transmitted on the Service-A circuit and

published in the NOTAM book. You can place more than one procedure on a T NOTAM if it does not get too complicated, otherwise used individual NOTAMS for each procedure.

NOTAMS issued on airways will ALWAYS be T NOTAMS. If the condition is permanent, then a revised 8260-16 is required.

b. P NOTAMS

P NOTAMS are prepared in the same manner as T NOTAMS but they permanently amend the procedure. Include the new amendment number by adding an ALPHABETIC SUFFIX to the current amendment number. For example, amendment 3 becomes amendment 3A or amendment 5A becomes amendment 5B. The NOTAM is transmitted over the Service-A circuit plus NFDC includes the NOTAM in a special section of the transmittal letter (TL). The procedure specialist must verify the publication accuracy in the same manner as if you had done a regular amendment. A P NOTAM can only contain one instrument procedure. The procedure specialist will file a copy of the P NOTAM in the procedure folder on top of the applicable form, since it reflects the change. Do not forget to enter the TL# on the procedure folder copy when it appears in the TL and ensure accuracy verification is checked against the FLIP product.

c. USD NOTAMS

AVN also issues "USD" NOTAMS against instrument departure procedures (DPs). These NOTAMS use the prefix "USD" These NOTAMS are temporary in nature and will not effect a charting change. Normal revisions to the DP are necessary to revise the FLIP. Follow AVN-160 policy for issuing USD NOTAMS.

d. NOTAM CANCELLATIONS

NOTAMS are generally canceled in two ways. The procedure specialist will include a cancellation statement on the applicable procedure forms, or another NOTAM is reissued based upon circumstances. A procedure specialist can also call NFDC and issue a cancellation request. Follow current AVN-160 policy to affect cancellation of NOTAMS.

414. - 499 RESERVED